

MARK MADISON: Hi, I'm Mark Madison, and today is June 2nd, 2010, and we're doing another in our monthly series of Podcasts with conservationists in action, writers, scientist and others who have gone out and done interesting conservation work, and this morning we're very fortunate to have Jonathan Waterman with us, who has just recently written a new book called "Running Dry: A Journey from Source to Sea Down the Colorado River."

And, John, thanks for agreeing to do this.

JONATHAN WATERMAN: My pleasure.

MARK MADISON: I guess the first obvious question is: What inspired you to make this journey all the way down the Colorado River?

JONATHAN WATERMAN: Well, I live in the headwaters of the river alongside a major tributary called the Roaring Fork, and my children are going to inherit whatever we make out of the resources in the west, and I felt given the pending crisis that it was appropriate to investigate what might be left for the next generation.

MARK MADISON: How did the river vary over its more than 1400-mile range?

JONATHAN WATERMAN: I was surprised by the differences not only, of course, in the geology and the terrain and the riverscape, but by the number of issues that I would find, you know, around virtually every corner or every hundred miles or so, habitat compromises, but to my great delight, the river in many sections is quite intact, and it's not just the Grand Canyon that's a place of beauty. There are many other sections along the river that were awe-inspiring.

MARK MADISON: So, John, I think the next obvious question is a logistical one... what type of craft did you use to go down the river, and did you travel by yourself or with others?

JONATHAN WATERMAN: I traveled alone for half the length of the river and used several different types of craft, a three-pound pack raft at the beginning and end, and then my kayak for much of the length of the river, and I hitched rides with friends and with researchers through the Grand Canyon on an oar frame raft.

MARK MADISON: One of the other things that comes out in your book that's pretty interesting is you looked at a lot of historical figures who traveled before you down the Colorado River. Which early explorers inspired you on this trip?

JONATHAN WATERMAN: Well, of course, there's John Wesley Powell, who some biographers have accused of being extravagant and full of a little bit of hyperbola, but, of course, I'd read Powell's book and learned a lot from it, but there are others, too, other early explorers, not only innovators with whitewater boats, but a man named Stanton who tried to build a railroad the length of the river, lost three men in the Grand Canyon in three separate drowning incidents. And early people such as Aldo Leopold, who went to the desert delta and wrote about a river that was still pristine in the 1920s.

MARK MADISON: Another thing that comes up a lot that would have been new to Powell and some of the earlier explorers was the damming of the river. Talk a little about some of the major dams on the Colorado.

JONATHAN WATERMAN: Well, in the course of my journey, I portaged around 13 dams, until the last dam in Mexico, the Morales, but in the basin, in the many major tributaries that comprise the Colorado River basin, there are more than 100 dams, and the river has been, in a biologist's word, fragmented by these dams. It prevents the passage of fish. It changes water temperature. And it traps the life-giving silt or sediment in the river.

These dams are clearly remarkable works of engineering, and if you put aside

your misgivings about the damage to the ecosystems below and above the dams, it's amazing what we've done, the civilization that we've built with these dams, and these dams have built-- really have been built to last forever.

But now the question that we're beginning to ask ourselves in times of drought, are these dams sustainable? By playing God with a river, what are the consequences? And we're finally learning the price of altering a very delicate river ecosystem by placing these large wedges of concrete in the river.

MARK MADISON: Well, that segues nicely to my next question, and that is: How does the river end? And I guess it's the same way, how does your book end?

JONATHAN WATERMAN: Well, I spent a lot of time at the river's end. Before I even started my journey, I flew down to the delta and spent several days there with biologists and people, both Mexican and American, who are trying to restore the river and the delta. And it's still-- it's hard to alter a landscape completely. It's a magnificent place with the mountains in the distance and a sense of the Sonoran Desert that stretches onto almost eternity before the river hits the sea, but the river no longer hits the sea. Only the high tides rinse up into the delta.

Now, without giving away the end of my book, of course, it was a great, depressing, exasperating moment to see this force of nature that flows near my home come to a screeching halt in a puddle of phosphates just past the Mexican border, but there is hope, nonetheless, there are conservationists, scientists, engineers, even government agencies who are concerned about the lack of water in the delta. And with a little bit of work, and even a little bit more resources, money, post flows can be returned to the delta, that is, post flows being a permanent or semipermanent pulses of water that would restore many of these wetlands that have been lost. 90% of the

wetlands have been lost in the delta. So there is tremendous hope for this to happen, but we have to turn people's attention to that fact, that this iconic river, the American Nile, as many people call it, no longer reaches the sea. So it's a great place to begin, among many other sections of the river that need restoring and many that are **still in act** and revered, and we just have to treat the river as a whole rather than fragmenting it and stopping it before it reaches the sea.

MARK MADISON: Which is a good reminder to people listening in, the title of John Waterman's book is "Running Dry."

One last thing about the book, a nice surprise at the end of the book is this beautiful map. Why don't you tell us a little about the map that comes with this book.

JONATHAN WATERMAN: Well, there is no single piece of paper that has as much valuable information as this National Geographic wall map. I worked with a team of advisors from throughout the basin, both engineers and conservationists, that had a lot of knowledge about the river, and not only was it a great learning experience for all of us, I guess, but if this piece of paper could be widely circulated, not only through my book, but we're giving it away, I think that more people would understand where we could begin looking for restoration on the river.

The one side of the map is a-- what you would expect from most maps... shows all the dams, the basin itself in respect to the municipalities that depend upon it, and the opposite side, the back side, is an unusual plumbing chart. It took a lot of time to pull this together. It actually shows all the incoming water, the evaporative water, and the outgoing water to the various farmlands and municipalities. So it's a stunning piece of work. I think, that it's safe to say that even the experts of the Colorado River Basin put it on their office walls and continue to learn about the river's beauty and its

challenges.

MARK MADISON: Audio doesn't do the map justice, but I can attest it's a beautiful map. I haven't seen one like it before.

Well, John, if listeners wanted to learn more about the book or about the map or where you might be speaking, would you have a place you could direct them to?

JONATHAN WATERMAN: I would direct them to my web site, jonathanwaterman.com. I would also direct listeners to savethecolorado.org, which is a philanthropic collection of companies such as New Belgium Brewing and Patagonia that are dedicated to restoring portions of the Colorado River. Savethecolorado.org and jonathanwaterman.com.

MARK MADISON: Well, John, thanks so much for your time, and thanks to all of you who took the time to listen to this Podcast.

JONATHAN WATERMAN: My pleasure. Thanks for having me.